



Monitoring Biodiversity

Using indicators to track trends across multiple scales and purposes

*Regional Workshop for Europe on Updating
National Biodiversity Strategies and Action Plans*

Isle of Vilm, Germany; 15-19 April 2011

Tristan Tyrrell

UNEP World Conservation Monitoring Centre

www.bipindicators.net

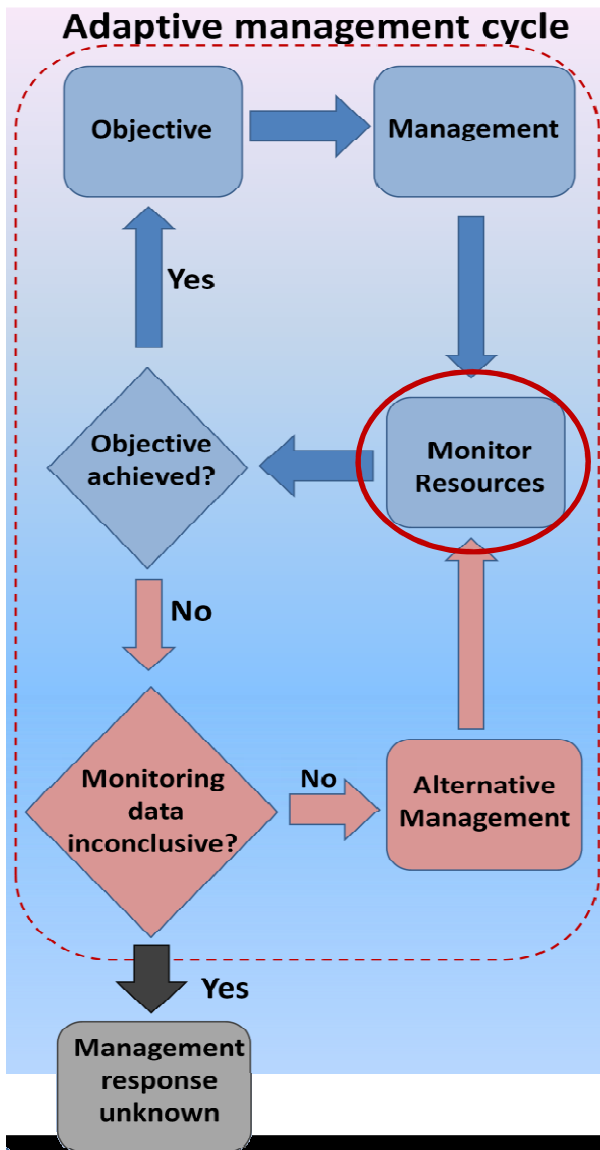




Why develop indicators?

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- Track progress in achieving targets
 - Adaptive management
- Guide policy
 - Show purpose & results
 - Highlight where action is needed
- Engage with stakeholders, including the scientific community
 - Can improve credibility
- Communicate simple messages



Communicating biodiversity

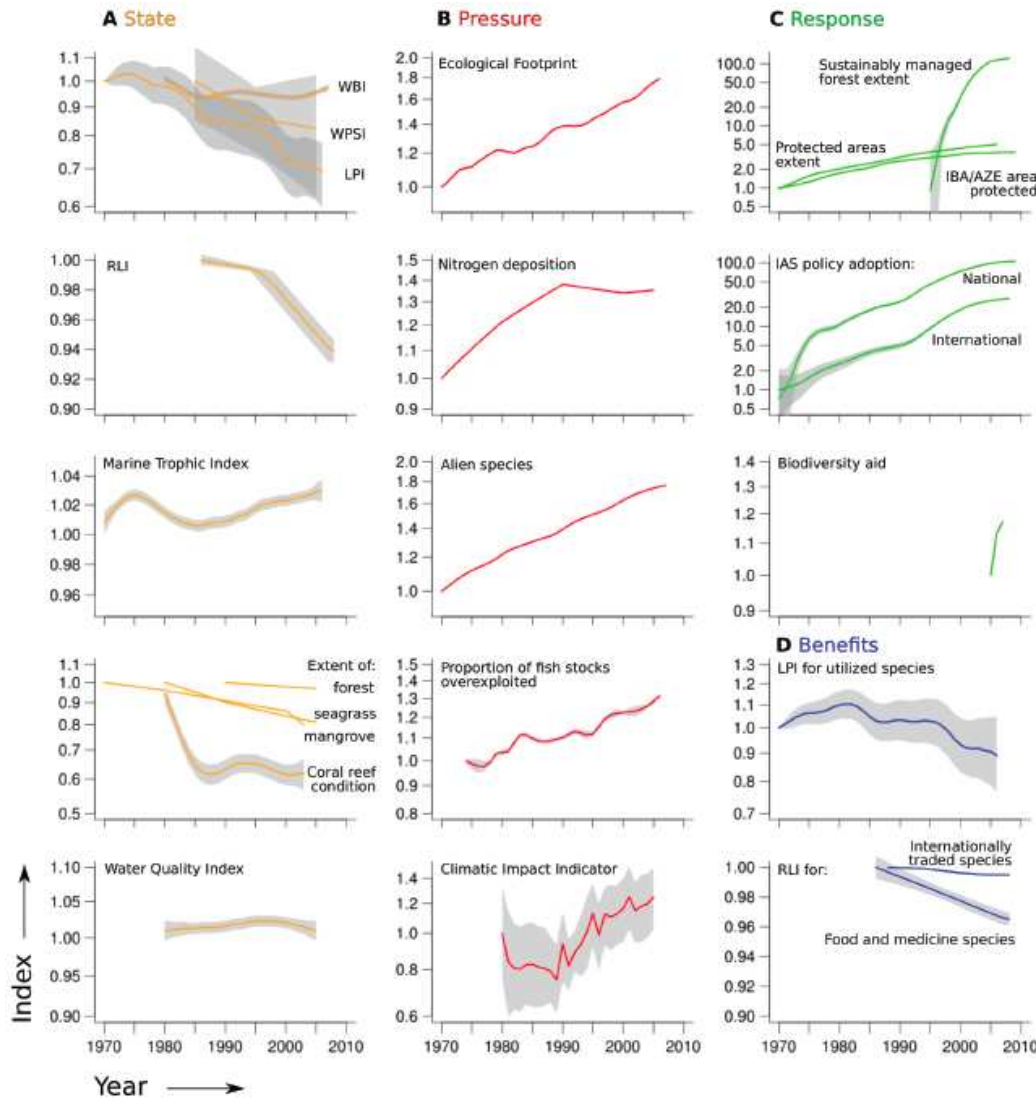
- 3rd edition of Global Biodiversity Outlook
- Butchart *et al.* (2010) *Science* 328: 1164-8

Global Biodiversity: Indicators of Recent Declines

Stuart H. M. Butchart,^{1,2*} Matt Walpole,¹ Ben Collen,³ Arco van Strien,⁴
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 Bastian Bomhard,¹ Claire Brown,¹ John Bruno,⁵ Kent E. Carpenter,⁶ Geneviève M. Carr,^{7†}
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 Damon Stanwell-Smith,¹ Simon N. Stuart,^{1,12,30,31} Andy Symes,² Megan Tierney,¹
 Tristan D. Tyrrell,¹ Jean-Christophe Vié,³² Reg Watson²⁴

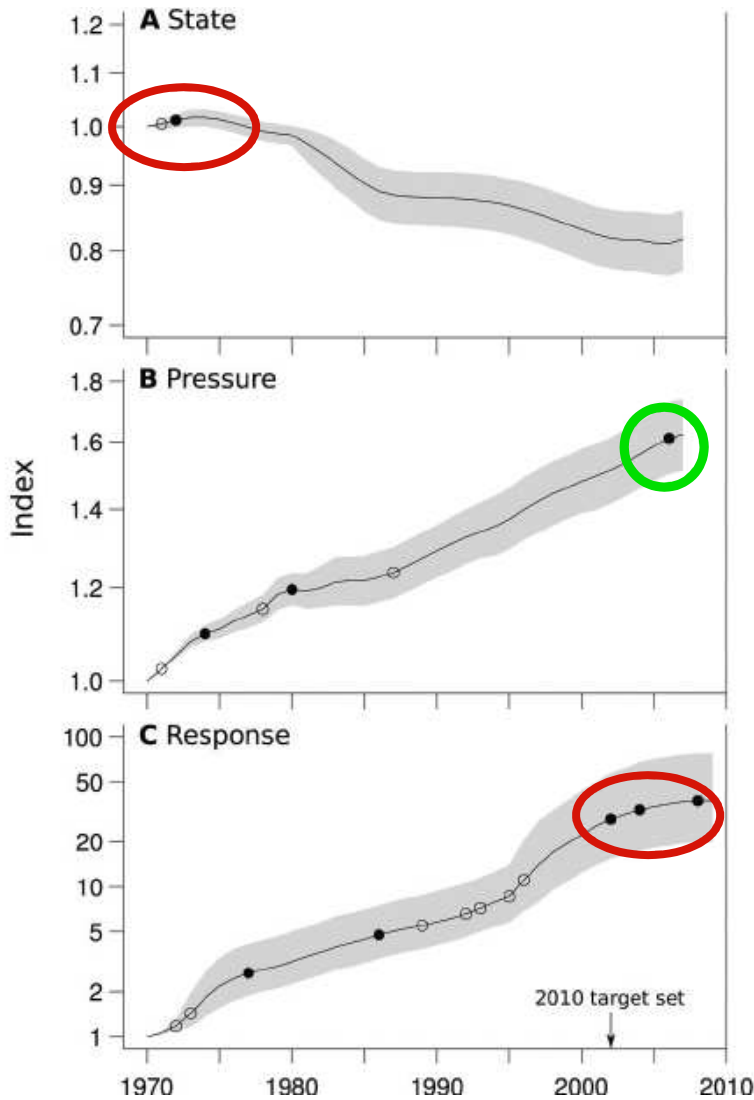
In 2002, world leaders committed, through the Convention on Biological Diversity, to achieve a significant reduction in the rate of biodiversity loss by 2010. We compiled 31 indicators to report





- Highlight successes
- Show ineffective implementation
- Can show regional differences
 - Not a homogenous story

Butchart *et al.* (2010) Global biodiversity: indicators of recent declines, *Science* 328: 1164-8



Can link improvements/
deteriorations to causes of change:

Significant inflections ↓ ●
↑ ○

Simple message:

"Highly unlikely that the 2010 Target will be met"

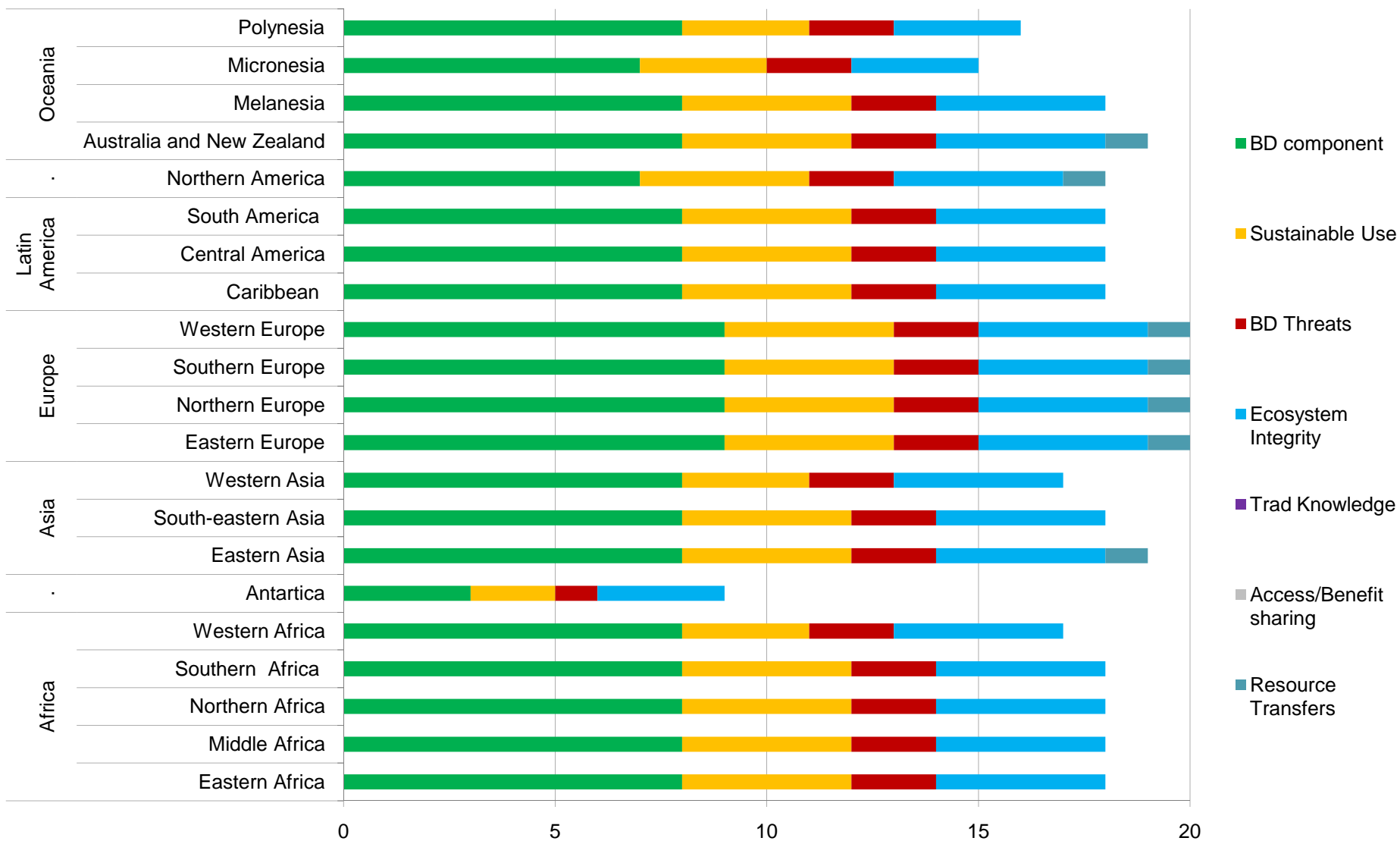
Butchart *et al.* (2010) Global biodiversity: indicators of recent declines, *Science* 328: 1164-8



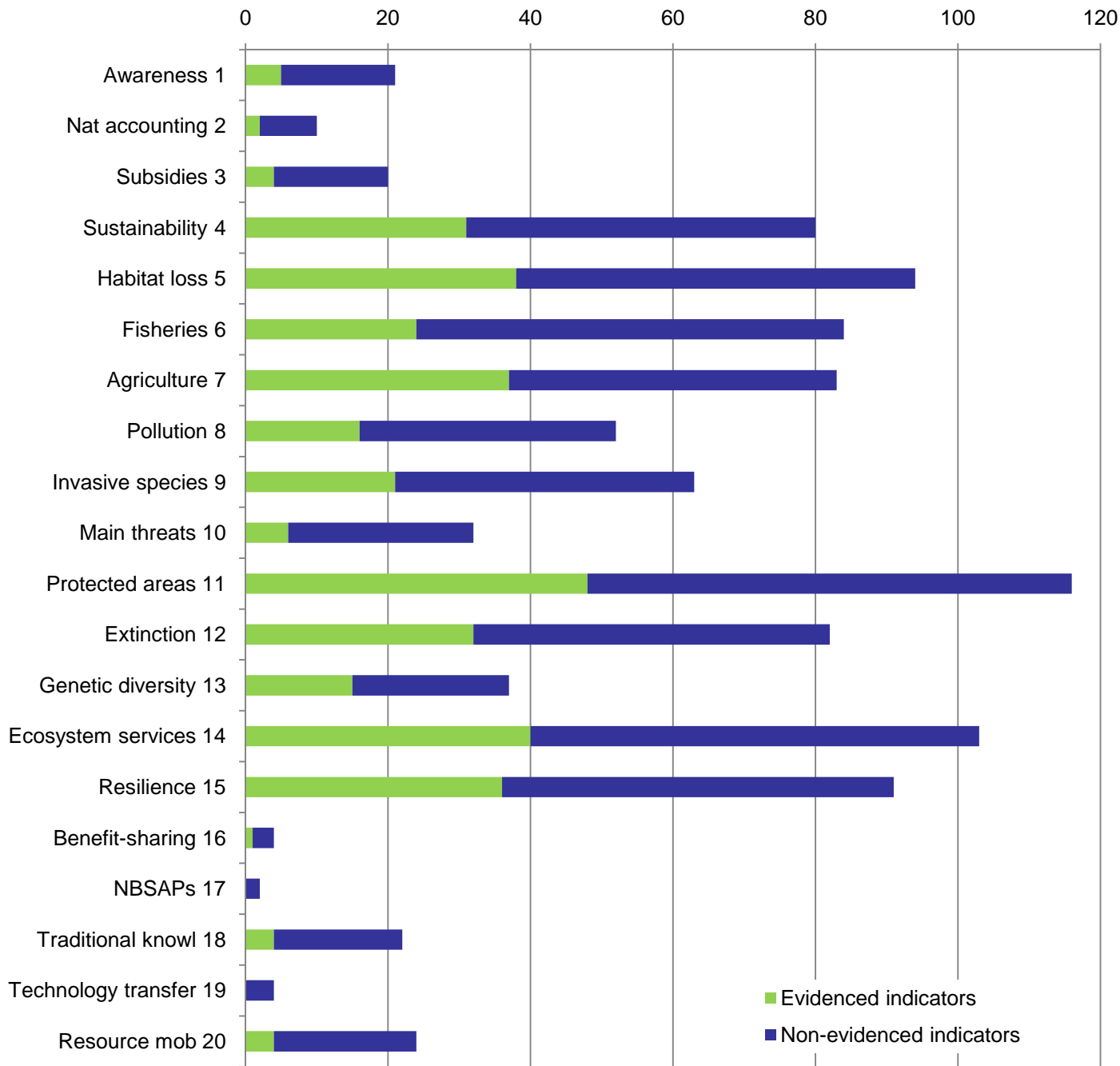
Current national Indicator use

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Number of indicators relating to 2010 focal areas (3rd National Reports)



Number of Parties with relevant indicators for each Aichi Target (4th National Reports)

Greater use of biodiversity indicators compared to 3rd National Reports



The challenges

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Obstacles to successful indicator development and use

- Lack of resources
 - Funding
 - Expertise
 - Data
- Insufficient stakeholder/audience consultation
- Project-based (i.e., unsustained) data collection and/or management
- Data may not be appropriate for indicator purpose, therefore possibly not sufficiently sensitive to change
- Part of a wider process of policy/strategy development and target setting
 - Can be an after-thought and therefore indicator suite possibly not appropriately designed



Possible solutions

www.bipindicators.net





Biodiversity Indicators Partnership (BIP)

The Biodiversity Indicators Partnership is a **CBD-mandated collaboration** aiming to provide the most up-to-date and timely information on biodiversity across the globe.

Formed in 2007, its primary focus was to report on the global progress towards achieving the 2010 Biodiversity Target.

Following Nagoya, it is now looking to build on the earlier mandate by broadening the suite of global indicators, involving a greater range of partners, and **increasing the capacity building efforts at national and regional levels.**

It has three pillars:

- Development of global indicators
- Communication and outreach on the status and trends of biodiversity
- Capacity support for national level monitoring and reporting

Working across the biodiversity-related and Rio MEAs on indicator design and implementation



Possible solutions

National indicator development resources

www.bipnational.net





Published national indicator development guidance



Coverage of protected areas
Guidance for national and regional use
Version 1.1



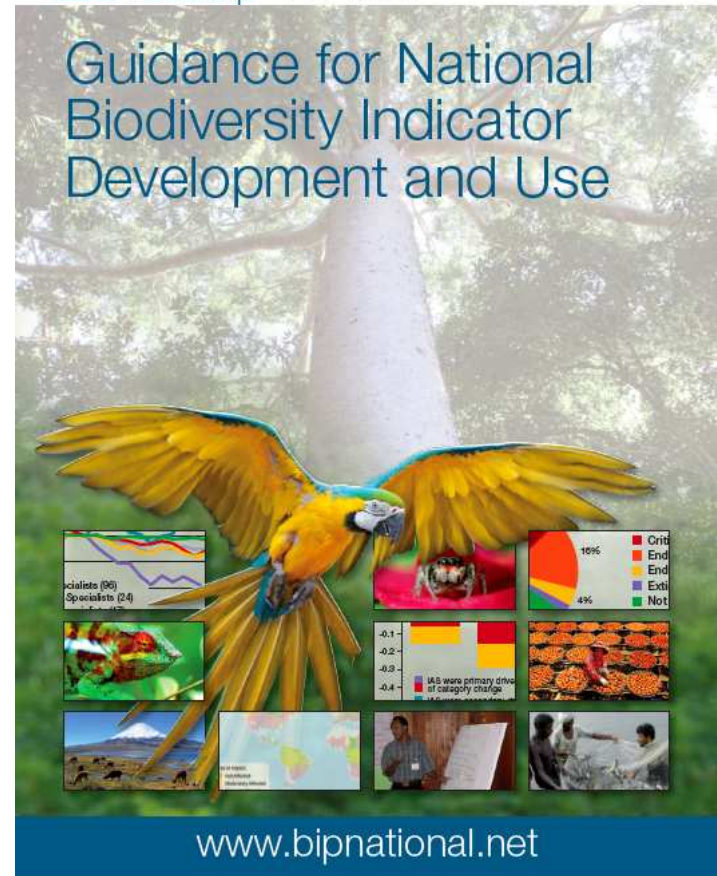
Living Planet Index
Guidance for national and regional use
Version 1.1



IUCN Red List Index
Guidance for national and regional use
Version 1.1



Guidance for National Biodiversity Indicator Development and Use



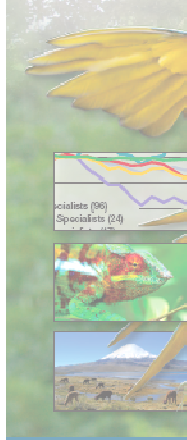
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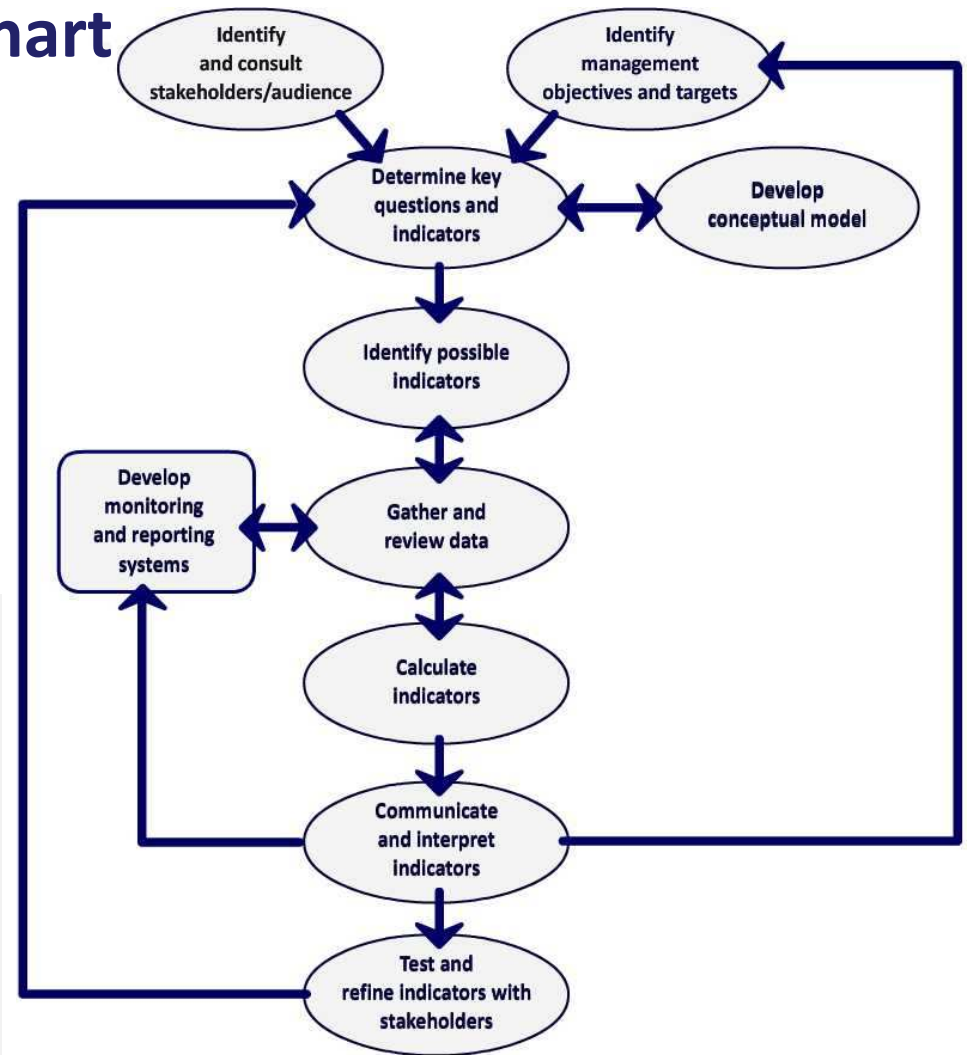
Indicator Development Flowchart



Guidance for National Biodiversity Indicator Development and Use



- Based on 7 years of workshop and country-level testing
- Now in use across four regions around the world
- Increases potential of indicator serving purpose





Online materials



2010 Biodiversity Indicators Partnership

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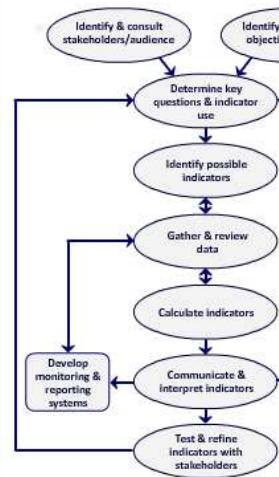


Home Indicator Uses Indicator Development

Biodiversity Indicator Development Framework

The Biodiversity Indicator Development Framework is intended to assist countries in developing their national indicators and to help plan the most appropriate development process.

This online framework contains information on each of the developed national indicators.




2010 Biodiversity Indicators Partnership

Home Indicator Uses Indicator Development

[Back to National and Regional Indicator Initiatives](#)

MOBI (Australia's Biodiversity Indicators)

The MOBI indicator set is complementary for decision makers and the public, and includes (e.g. Farmers counting species on their own land) the MOBI indicator.

Indicator Summary

Scale: National

Year Started: 2003 (commencing a project to develop an indicator set (2006 first publication of an indicator report)

Countries Included: Australia

Organization Responsible: lebensministerium.at
Ministry of Agriculture, Forestry, Environment and Water Management (Biodiversität im Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)

Focal Point: Ingeborg Faltl

Location, level, and advice

Want to know more about the challenges and lessons learnt from this initiative? Ingeborg Faltl, or lead coordinator of MOBI shares her experiences and provides some words of advice to national experts looking to develop their own biodiversity indicators.

View the interview.



Why and how was the initiative started?

The Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (Biodiversität im Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft) is responsible for the development of the MOBI indicator set. The MOBI indicator set was developed in close cooperation with the national experts and reporting obligations (e.g. CBD), as well as upon synergies with FPM, monitoring and other evaluation procedures.

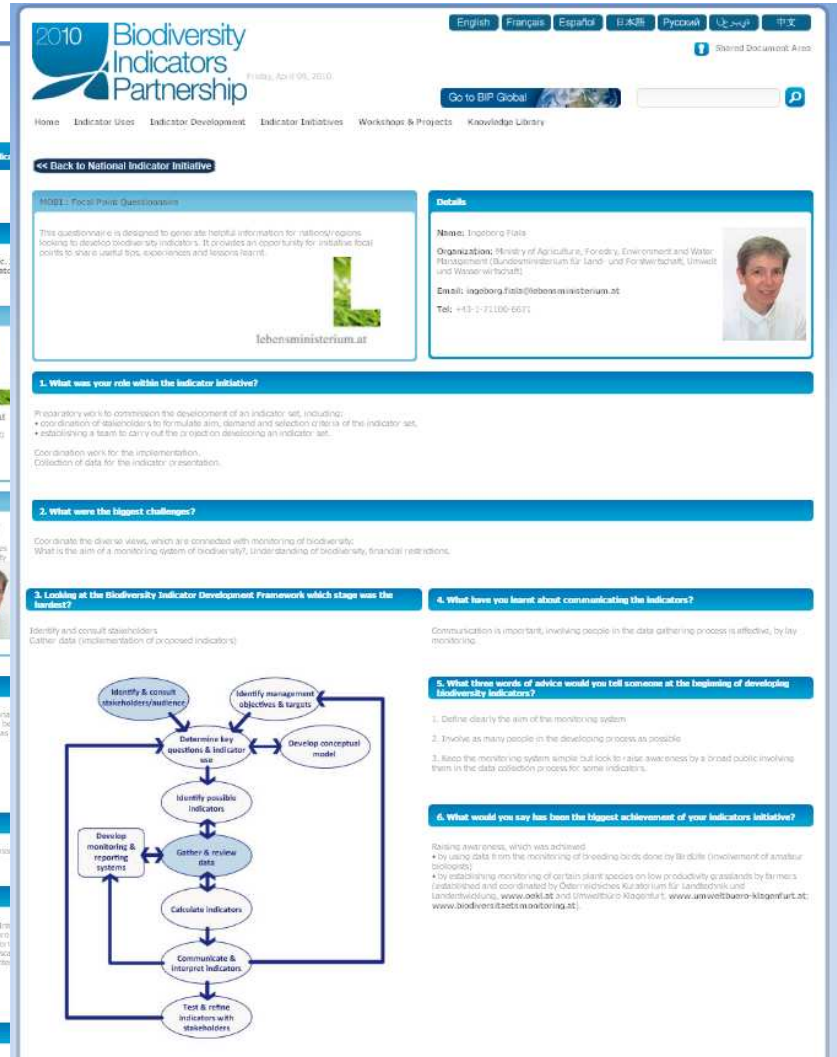
Who's leading the work?

Ministry of Agriculture, Forestry, Environment and Water Management (Biodiversität im Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)

How were the indicators selected?

The Centre of Environmental Research and Nature Conservation (Department of the University of Natural Resources and Applied Life Sciences, Vienna) and Umweltbüro (Department of the Federal Research and Training Centre for Forests, Nature and Landscape) supported the MOBI indicator development process. An advisory board of experts from the MOBI team to help with indicator selection.

What are the indicators?



2010 Biodiversity Indicators Partnership

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MOBI Focal Point Questionnaire

This questionnaire is designed to generate helpful information for nations/regions looking to develop biodiversity indicators. It provides an opportunity for initiative focal points to share useful tips, experiences and lessons learnt.

lebensministerium.at


Details

Name: Ingeborg Faltl

Organization: Ministry of Agriculture, Forestry, Environment and Water Management (Biodiversität im Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft)

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1. What was your role within the indicator initiative?

Preparatory work to commission the development of an indicator set, including:
 • coordination of stakeholders to formulate aim, demand and selection criteria of the indicator set,
 • establishing a team to carry out the project (developing an indicator set).

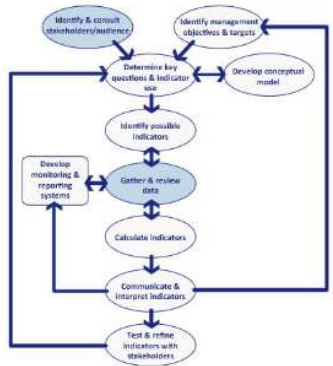
Coordination work for the implementation.
 Collection of data for the indicator presentation.

2. What were the biggest challenges?

Coordinate the diverse views, which are connected with monitoring of biodiversity.
 What is the aim of a monitoring system of biodiversity? Understanding of biodiversity, financial restrictions.

3. Looking at the Biodiversity Indicator Development Framework which stage was the hardest?

Identify and consult stakeholders.
 Gather data (implementation of processed indicators)



4. What have you learnt about communicating the indicators?

Communication is important, involving people in the data gathering process is effective, by long monitoring.

5. What three words of advice would you tell someone at the beginning of developing biodiversity indicators?

1. Define clearly the aim of the monitoring system.
2. Involve as many people in the developing process as possible.
3. Place the monitoring system simple but lock to raise awareness by a broad public involving them in the data collection process for some indicators.

6. What would you say has been the biggest achievement of your indicators initiative?

Raising awareness, which was achieved
 • by using data from the monitoring of breeding birds done by the public (involvement of amateur biologists)
 • by establishing monitoring of certain plant species on low productivity grasslands by farmers (established and coordinated by Osterreichs Kulturland für Landwirtschaft und Landschaftswirtschaft, www.oekb.at and Umweltbüro Kognition, www.umweltbuero-kognition.at;
www.biodiversityindicatorsmonitoring.at).



Facilitating peer-to-peer capacity support

- Allows for tailoring indicators appropriate for bioregional location
- Sharing experience & best practice
- Data sharing and resource collaborations
- Funding already secured, with special focus on eastern Europe





Possible solutions

*Global & regional indicator developers and
data holders*

www.bipindicators.net





The BIPs broad range of global and regional indicator developers, data holders, and users



The 2010 Global Indicator Suite

Focal Area	Headline Indicators	Measures
Status and trends	Trends in extent of selected biomes, ecosystems, and habitats	Extent of forests and forest types Extent of assorted habitats
	Trends in abundance and distribution of selected species	Living Planet Index Global Wild Bird Indicator
	Coverage of protected areas	Coverage of Protected Areas Overlays with biodiversity Management effectiveness
	Change in status of threatened species	Red List Index and Sampled Red List Index
	Trends in Genetic Diversity	<i>Ex situ</i> crop collections Genetic diversity of terrestrial domesticated animals
Sustainable use		Area of forest under sustainable management: certification
	Areas under sustainable management	Area of forest under sustainable management: degrad. and deforestation
		Area of agricultural ecosystems under sustainable management
	Proportion of products derived from sustainable sources	Proportion of fish stocks in safe biological limits Status of species in trade Wild Commodities Index
	Ecological Footprint	Ecological Footprint
Threats	Nitrogen Deposition	Nitrogen Deposition
	Invasive Alien Species	Invasive Alien Species
Ecosystem integrity / services	Marine Trophic Index	Marine Trophic Index
	Water Quality	Water Quality
	Connectivity/frag'm of ecosystems	Forest Fragmentation River fragmentation and flow regulation
	Health and well being of communities	Health / well being of communities directly dependent on ecosystem services
	Biodiversity for food & medicine	Nutrition indicators of biodiversity Biodiversity for food and medicine
Trad. knowledge	Status and trends of linguistic diversity	Status and trends of linguistic diversity
Resource transfers	Assistance provided in support of the CBD	Official development assistance provided in support of the CBD

The post-2010 Indicator Suite



Following AHTEG on indicators (June 2011):

- Will build on 2010 suite
- Will broaden suite to address a greater range of drivers, including climate change
- Will have a greater focus on ecosystem services
- Framework will be structured to link aspects (e.g., drivers to state to responses) to aid communication and awareness raising



For more information:

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www.bipindicators.net

www.bipnational.net



Working together to track global biodiversity trends